

Andorra — a Visit in July 1976

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There seems to be a scarcity of information about the butterflies of the Principality of Andorra, so this encourages us to feel that a brief note may be of interest.

The visit by the Greenwoods was suggested by Dr. Roche who has recently retired from his last appointment in the Seychelles and has become a resident of Andorra. The fact that he had already found a number of productive localities not only made a 10-day visit much more enjoyable and successful but saved a great deal of time.

There are several ways to reach Andorra and we chose what would be the quickest—by air from London to Barcelona where we had arranged to be met by taxi. Our first class driver covered 140 miles of largely mountainous road in less than four hours, against the more normal five to six. The route is spectacularly beautiful, passing close to the extraordinary peaks which form Montserrat.

Andorra itself is small and mountainous consisting essentially of a road running north and then east beside a river and edged by precipitous hillsides which for much of the distance form a deep and narrow gorge. From this principal road there are a few secondary routes but the greater part of the country cannot be reached by wheeled transport and only some 2% of the entire area can be cultivated, the principal crops being tobacco and vegetables, usually grown in very small terraced plots of no more than a few hundred square metres, often much less.

As a tax free haven the country is popular for a short stay, perhaps for only one night when good scotch whisky at just over £1 a bottle provides sufficient reason. Facilities for skiing have been developed so that there is a good winter season.

During two seasons Dr. Roche, whose principal interest is the Hemiptera, has recorded 118 species of butterflies. This total includes a few which the Greenwoods were able to add and our own tally for our 10 day stay was 94, which we felt was quite remarkable.

The weather from the 2nd to the 13th July was excellent, sunny with temperatures up to 95°F. and very low humidity. On three days there were brief but heavy afternoon thunderstorms but the ground dried very rapidly.

Dr. Roche lives in the town of Sant Julià de Lòria, which is some two miles from the Spanish border and about five miles south of the capital Andorra la Vielle, a much larger town largely devoted to tourism. In view of the heavy week-end traffic on the main road, we concentrated for the first two days on areas within walking distance of our hotel in Sant Julià. The two areas were within half a mile of our base,

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perhaps half a mile apart and divided by a rocky ridge. We were amazed by the number of species to be found in these small areas, neither being larger than two or three acres in extent, and by the great abundance of insects. Each area had a stream and bush and varied vegetation. Over a season over 100 species of butterfly could be recorded from these two small localities.

Perhaps even more surprising in two areas so close to one another was the fact that there were many differences in the insect population. It seems strange that, for example, so unmistakable and powerful a butterfly as *Parnassius apollo* L. should be common in one and apparently absent, even as a visitor, in the other.

For five of the remaining eight days we worked other areas, none of which was more than some 20 miles from Sant Julià, the altitude varying from 3,000 feet near our base to over 6,000 feet. At the higher levels we roamed alpine meadows full of flowers such as purple gentian, orchids and an impressive variety of other attractive plants.

In every locality butterflies were abundant.

On our second week-end we again kept off the roads and revisited the two localities near Sant Julià. Even after such a short interval we found an appreciable number of fresh species, for example the larger fritillaries *Argynnis paphia* L. and *Fabriciana adippe* D. & S.

Lunching on a very hot day within the car in the hope of avoiding attacks by a voracious Tabanid fly we were visited by a very fresh specimen of *Mellicta athalia celadussa* Fruh., the commonest fritillary. This insect insisted on sitting on J.A.C.G.'s thumb where it enjoyed an apparently refreshing meal of salty sweat. It was so interested in absorbing the maximum from this free and constantly replenished supply that it refused to leave, and when its body and the underside of its wings were stroked with a finger it showed every sign of pleasure by raising and lowering its wings. It finally departed only after J.A.C.G. had got out of the car and forcibly removed it.

Another incident concerned *Apatura ilia* D. & S. On our second day we felt that a glimpse of a rapidly moving object at long range might have been *ilia* although P.J.L.R. had not previously observed the species. We therefore decided to try the common bait for African *Charaxes* species of fermented bananas. After three days the mixture was judged to be sufficiently potent and was deposited on the path and on a rock by the stream. Almost immediately a splendid male *ilia* appeared and began to feed. Shortly after another came down and sat on a stone in midstream. Several other sightings indicated a strong colony. One female took up a position high in a large willow bush where she remained for some 20 minutes walking about but not flying. Finally, in an attempt to persuade her to move elsewhere, J.A.C.G. (who was somewhat painfully positioned in a luxuriant growth of nettles and brambles) violently agitated the bush, but it was not until the branch

was swaying as though in a high wind in Jamaica that the butterfly decided to seek rest elsewhere.

Dr. Roche reported that *Nymphalis antiopa* L. was commonly seen after hibernation when specimens were in poor condition. He had not seen it in the autumn. It was therefore pleasing on our last day to find a nest of half grown larvae on a small willow bush. These fed up quickly pupating on the 22nd and 25th July with the imagines appearing between the 7th and 9th August in Surrey and some four days earlier in Andorra. The habit of the larvae in swaying the front half of the body violently from side to side at the least disturbance, no more than sudden movement of the air, was very striking and the same movement was repeated by the pupae.

A number of moths, largely *Geometridae* and a few *Zygaenidae*, were stirred up by day. Several *Macroglossum stellatarum* L. were busily flying and *Hipparchus papilionaria* L. was quite frequently around town lights.

When we arrived two unexpected gaps in P.J.L.R.'s list were *Pontia daplidice* L. and *Lampides boeticus* L. All three of us felt confident that both species should be found and indeed we were eventually successful although it was surprising that *daplidice* was only seen as a few singletons and we could only find one male and one female of *boeticus*, both in a deplorable state of dilapidation suggesting, perhaps, that they were migrant individuals.

We can strongly recommend the area for an entomological holiday and P.J.L.R. has kindly said that he will be willing to give advice if asked. Spanish and French are spoken and either currency is accepted.

We were not able to visit the highest point on the road (7,900 ft.), the pass leading into France, because on the proposed day the area was in the clouds.

The areas worked were: —

A — 400 yards E. of Sant Julià, 3,500 feet.

B — about 800 yards S. of A., 3,500 feet.

C — Ayuvinya, 3 to 4 miles E. of Sant Julià, 4,500 feet.

D — Encamp Cortals, 13 miles N. of Sant Julià, 6,000 feet and upwards.

E — Val d'Incles, 15 miles N. of Sant Julià, 6,000 feet and upwards.

F — Os de Civis (actually in Spain but the only road is from Andorra) and Bixessarri, 4,500 and 4,000 feet respectively.

For ease of reference the list of species which follows is in the order used in Higgins, L. G. and Riley, N. D. (1970), *A Field Guide to the Butterflies of Britain and Europe* and we have used their nomenclature. Species marked P.J.L.R. have been recorded by Dr. Roche, but were not seen during the Greenwood's visit. All those not so marked were seen between the 2nd and 13th July, 1976. Of the 118 species no less than 99 were recorded from localities A and B and so were within 10 minutes' walk of the hotel.

Actual localities are not shown for the widespread species.

It seems likely that further collecting will add at least 20 more butterfly species to this Andorra list. These will doubtless include a Pierid or two, several Satyrids (especially *Erebia* spp.) and Lycaenids. As for the moths . . . with a certain minimum of 118 species of butterfly, it is more than probable that the total lepidopterous fauna of Andorra might be in the 5,000-6,000 bracket. This little country has the double advantage of being on the boundary between the N.W. European and Iberian zoogeographical subregions and of varying in altitude between 3,000 and nearly 10,000 feet.

The minimum of 118 species of butterfly represents almost one-third of the total known to occur in Europe. Where else in Europe can 99 species be seen within 15 minutes' walk of one's front door?

List of Butterflies recorded from Andorra

Papilio machaon L., A/B, scarce. *Iphiclides podalirius feisthamelii* Duponchel, B, only one seen by Greenwoods but usually widespread and common. *Parnassius apollo* L., B/C. *Aporia crataegi* L., A/B/C. *Pieris brassicae brassicae* L., widespread. *Pieris rapae* L., widespread. *Pieris napi napi* L., widespread. *Pontia daplidice* L., C/F, v. scarce. *Pontia callidice* Huebner, El Serrat (recorded by H. L. Lewis, July 1973). *Anthocharis cardamines* L., A/B. *Anthocharis belia euphenoides* Staudinger, A/B/C. *Colias phicomone* Esper, D, local, but in this high altitude locality much more common than usual with *Colias* species. *Colias crocea* Geoffroy, widespread. *Colias hyale* L., F, P.J.L.R.; A/B. *Colias australis* Verity, P.J.L.R., A/B. *Gonepteryx rhamni* L., B, P.J.L.R., A. *Gonepteryx cleopatra europaea* Verity, B, very scarce. *Leptidea sinapis* L., plentiful. *Libythea celtis* Laicharting, P.J.L.R., A, extremely local — only seen in one area of about 100 sq. yds. *Apatura ilia barcina* Verity, B. *Limenitis reducta* Staudinger, B. *Limenitis camilla* L., P.J.L.R., B. *Nymphalis antiopa* L., Greenwoods' larvae, C; P.J.L.R. imagines, A/B, common in early spring and summer. *Nymphalis polychloros polychloros* L., A/B/C. *Inachis io* L., C, P.J.L.R., A/B. *Vanessa atalanta* L., B, P.J.L.R., A. *Vanessa cardui* L., a few only but widespread. *Aglais urticae urticae* L., common everywhere. *Polygona c-album* L., A/B, a few. *Argynnis paphia paphia* L., A/B/F, frequent. *Mesoacidalia aglaja aglaja* L., A/B/E, abundant. *Fabriciana adippe adippe* D. & S., A/B/F. *Issoria lathonia* L., B/C, scarce. *Brenthis daphne* D. & S., A/B/C. *Brenthis ino* Rottentburg, A/B/C/D. *Boloria pales pyrenesmiscens* Verity, D, plentiful in this area. *Boloria napaea* Hoffmannsegg, D. *Procllossana eunonia eunonia* Esper, D/E. *Clossiana selene* D. & S., A/B/C. *Clossiana euphrosyne* L., A/C. *Clossiana dia* L., A/B. *Melitaea cinxia* L., widespread. *Melitaea phoebe phoebe* D. & S., widespread. *Melitaea didyma meridionalis* Staudinger, A/B/C. *Melitaea diamina diamina* Lang (transitional to *M.d. vernetensis* Rondou), P.J.L.R., C. *Mellicta athalia celadussa* Fruhstorfer, abundant. *Mellicta*

deione deione Geyer, P.J.L.R., A/B. *Mellicta parthenoides* Keferstein, P.J.L.R., A. *Euphydryas aurinia debilis* Oberthur, A, one only. *Melanargia galathea lachesis* Huebner, A/B/C, abundant. There is a colony at Encamp (4,000 ft.) which is intermediate between *M.g. galathea* and *M.g. lachesis*. *Melanargia russiae cleanthe* Boisduval, A/B/C. *Hipparchia alcyone alcyone* D. & S., B/F. *Hipparchia semele cadmus* Fruhstorfer, C, 1 only. *Satyrus actaea* Esper, P.J.L.R., A/B. *Brintesia circe* Fabricius, A/C/F. *Erebia euryale euryale* Esper, P.J.L.R., D. *Erebia epiphron fauveaui* de Lesse, D/E, very plentiful. *Erebia triaria triaria* de Prunner, P.J.L.R., A/B. *Erebia cassioides arvernensis* Oberthur, D. *Erebia oeme oeme* Huebner, E. *Erebia meolans bejarensis* Chapman, B/C. *Maniola jurtina hispulla* Esper, widespread. *Hyponephele lycaon* Keuhn, P.J.L.R., B. *Pyronia tithonus* L., a few A/B, abundant in late July/August. *Coenonympha pamphilus pamphilus* L., widespread. *Coenonympha arcania arcania* L., abundant at lower levels. *Coenonympha dorus dorus* Esper, P.J.L.R., B. *Pararge aegeria aegeria* L., a few. Very common in spring in A. *Lasiommata megera megera* L., widespread. *Lasiommata maera maera* L., widespread. *Hamearis lucina* L., B, one only, very worn. A, in April and May. *Thecla betulae* L., P.J.L.R., A/B. *Quercusia quercus quercus* L., A, one only. *Laesopsis roboris* Esper, A/B, very plentiful. *Nordmannia acaciae* Fabricius, A/B. *Nordmannia ilicis* Esper, A/B. *Nordmannia esculi esculi* Huebner, A/B. *Strymonidia spini* D. & S., P.J.L.R., A/B. *Strydomidia w-album* Knoch, P.J.L.R., A/B. *Callophrys rubi* L., P.J.L.R., A. *Lycaena phlaeas phlaeas* L., a few widespread. *Heodes virgaureae virgaureae* L., B/C/E. *Heodes tityrus tityrus* Poda, A/C/E. *Heodes alciphron gordius* Sulzer, C, one only. *Palaeochrysophanus hippothoe hippothoe* L., A/B/C/D/E, abundant. *Lampides boeticus* L., B/C, very scarce. *Everes argiades* Pallas, P.J.L.R., A. *Everes alcetas* Hoffmannsegg, P.J.L.R., A/B, very common in August. *Cupido minimus minimus* Fuessly, A/B/D/E/F. *Calestrina argiolus* L., A/B/C/F. *Glaucopsyche alexis alexis* Poda, P.J.L.R., A/B. *Maculinea arion arion* L., B/C, scarce. *Plebejus argus argus* L., C/D. *Lycaeides idas idas* L., A/D/E. *Eumedonia eumedon* Esper, D, common but excessively local, not straying more than two yards from clumps of *Geranium pratense*, the larval foodplant. *Aricia agestis agestis* D. & S., widespread. *Aricia allous montensis* Verity, P.J.L.R., A/B. *Cyaniris semiargus* Rottemburg, widespread. *Plebicula escheri escheri* Huebner, P.J.L.R., A/A. *Plebicula dorylas* D. & S., A/B/F. *Plebicula amanda amanda* Schneider, A/B/C. *Plebicula thersites* Cantener, P.J.L.R., A, apparently uncommon but probably overlooked owing to its superficial resemblance to the abundant *P. icarus*. *Lysandra coridon coridon* Poda, P.J.L.R., D, very local and uncommon. *Lysandra albicans albicans* Herrich-Schaeffer f. *arragonensis* Gerhard, plentiful. *Lysandra bellargus* Rottemburg, A/B/C. *Polyommatus icarus* Rottemburg, abundant. *Pyrgus malvae* L., A/B/E, probably *P. malvae malvoides* Elwes & Edwards. *Pyrgus alveus* Heubner, D, prob-

ably *P. alveus centralitaliae* f. *centralhispaniae* Verity. *Pyrgus serratulae* Rambur, D. *Pyrgus cirsii* Rambur, P.J.L.R., A/B. *Spialia sertorius sertorius* Hoffmannsegg, P.J.L.R., B (also at "OS" by Greenwood but actually in Spain). *Carcharodus alceae* Esper, A/B/C. *Carcharodus flocciferus* Zeller, A/B/F. *Eyrnnis tages* L., A/B/E. *Thymelicus lineola lineola* Ochsenheimer, E. *Thymelicus sylvestris* Poda, A/B/E/F. *Hesperia comma comma* L., P.J.L.R., A/B. *Ochlodes venatus* Turati, A.

Notes and Observations

AN EFFECTIVE BIRD DETERRENT? — Many who operate a light trap suffer from sparrows and other small birds entering it and eating the moths within. Mr. A. J. Dewick of Bradwell-on-Sea was for a long time much bothered by these pests until about four years ago, when his son Stephen hit on a brilliant idea. He placed at the entrance of the trap an artificial snake made of plastic and from that day to this has had no further trouble. Mr. Dewick and his son showed me the snake which is remarkably life-like, and when placed on the edge of the trap and touched, slithers down in a most realistic manner! — J. M. CHALMERS-HUNT.

NOTES ON AN INTRODUCED "COLONY" OF THE BLACK-VEINED WHITE (*APORIA CRATAEGI* L.) IN SCOTLAND. — In 1974, from various parts of the Madrid district, I secured a few hundred eggs of this species and brought them back to this address in Fife, where I am now living. In 1975, about 200 butterflies successfully emerged in that most unlikely of events in Scotland, a heatwave. A large number paired, and immediately laid eggs on the surrounding hawthorns, and to a lesser extent on some very old apple trees in my orchard. I collected as many of these eggs as I could find, and reared another generation which emerged once again during a heatwave, in mid-June 1976. From these I retrieved as many eggs as possible, but fewer than before, from which only about 100 butterflies emerged, this time in the first week of July but again in a heatwave. In 1977, however, I succeeded in finding about 700 eggs, quite a few of which were on apple and for the first time some on a plum tree.

This year I was present when most of the females emerged, about 48 hours on average after the males, and I immediately put these out on a bush, and in most cases they were paired within five or ten minutes. In other years the females have flown straight out of the summerhouse where I had kept the pupae, and this probably tended to scatter them and resulting in many not finding mates. This year I found all the eggs within a circle of 100 yards of the release point, and mostly within 100 feet of it.

There is a problem with birds which have caught some of the butterflies. I have also lost larvae from attack by *Apanteles*,